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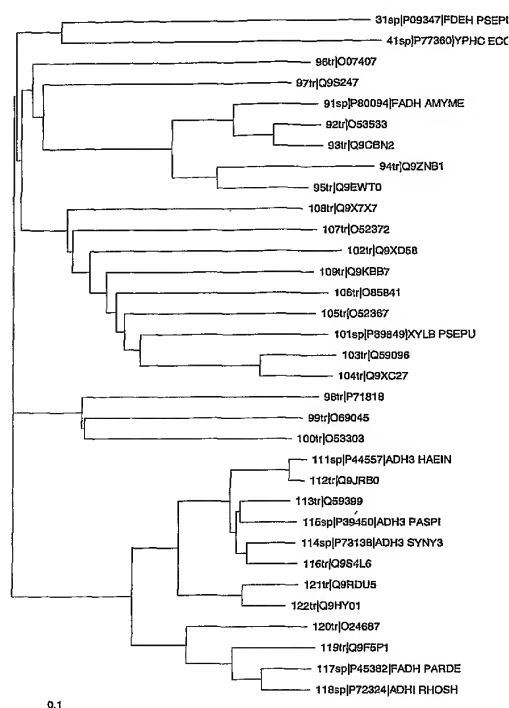
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[Continued on next page]

(54) Title: NOVEL ALCOHOL DEHYDROGENASES



Overview of cluster 2 (= primer group 2), based on 33 sequences

(57) Abstract: The invention relates to novel polypeptides which have the biological activity of an NAD- or NADP-dependent alcohol dehydrogenase. The invention furthermore relates to nucleic acids encoding said polypeptides, to non-human hosts or host cells and to reaction systems which may be used for preparing desired products. The polypeptides of the invention are preferably used in the preparation, starting from aldehydes or ketones, of primary and enantiomerically pure secondary alcohol's which may serve as intermediates for medicaments. Alternatively, the polypeptides of the invention may also be employed in the reverse reaction, i.e. the oxidation of alcohol's with the formation of aldehydes or ketones.



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**AMENDED CLAIMS**

[received by the International Bureau on 27 January 2006 (27.01.06);  
original claim 1 replaced by new claims 1; remaining claims unchanged (3 pages)]

1. A polypeptide which has the biological activity of  
an NAD- or NADP-dependent alcohol dehydrogenase  
5 and which comprises or has one of the following  
sequences: the sequence of SEQ ID NO.: 1, the  
sequence of SEQ ID NO.: 2, the sequence of SEQ ID  
NO.: 3 or a sequence which is at least 90%  
identical to the sequence of SEQ ID NO.: 3, the  
10 sequence of SEQ ID NO.: 4, the sequence of SEQ ID  
NO.: 5 or a sequence which is at least 90%  
identical to the sequence of SEQ ID NO.: 5, the  
sequence of SEQ ID NO.: 6 or a sequence which is  
at least 90% identical to the sequence of SEQ ID  
15 NO.: 6, the sequence of SEQ ID NO.: 7 or a  
sequence which is at least 70% identical to the  
sequence of SEQ ID NO.: 7, the sequence of SEQ ID  
NO.: 8 or a sequence which is at least 70%  
identical to the sequence of SEQ ID NO.: 8, the  
20 sequence of SEQ ID NO.: 9 or a sequence which is  
at least 70% identical to the sequence of SEQ ID  
NO.: 9, the sequence of SEQ ID NO.: 10 or a  
sequence which is at least 70% identical to the  
sequence of SEQ ID NO.: 10, the sequence of SEQ ID  
25 NO.: 11 or a sequence which is at least 70%  
identical to the sequence of SEQ ID NO.: 11, the  
sequence of SEQ ID NO.: 12 or a sequence which is  
at least 60% identical to the sequence of SEQ ID  
NO.: 12, the sequence of SEQ ID NO.: 13 or a  
30 sequence which is at least 60% identical to the  
sequence of SEQ ID NO.: 13, the sequence of SEQ ID  
NO.: 14 or a sequence which is at least 75%  
identical to the sequence of SEQ ID NO.: 14, the  
sequence of SEQ ID NO.: 15 or a sequence which is  
35 at least 95% identical to the sequence of SEQ ID  
NO.: 15, the sequence of SEQ ID NO.: 16 or a  
sequence which is at least 95% identical to the

sequence of SEQ ID NO.: 16, the sequence of SEQ ID NO.: 17 or a sequence which is at least 75% identical to the sequence of SEQ ID NO.: 17, the sequence of SEQ ID NO.: 18 or a sequence which is at least 70% identical to the sequence of SEQ ID NO.: 18, the sequence of SEQ ID NO.: 19 or a sequence which is at least 70% identical to the sequence of SEQ ID NO.: 19, the sequence of SEQ ID NO.: 20 or a sequence which is at least 60% identical to the sequence of SEQ ID NO.: 20, the sequence of SEQ ID NO.: 21 or a sequence which is at least 90% identical to the sequence of SEQ ID NO.: 21, the sequence of SEQ ID NO.: 22 or a sequence which is at least 70% identical to the sequence of SEQ ID NO.: 22, the sequence of SEQ ID NO.: 23 or a sequence which is at least 55% identical to the sequence of SEQ ID NO.: 23, the sequence of SEQ ID NO.: 24 or a sequence which is at least 65% identical to the sequence of SEQ ID NO.: 24, the sequence of SEQ ID NO.: 25 or a sequence which is at least 55% identical to the sequence of SEQ ID NO.: 25, the sequence of SEQ ID NO.: 26 or a sequence which is at least 55% identical to the sequence of SEQ ID NO.: 26, the sequence of SEQ ID NO.: 27 or a sequence which is at least 55% identical to the sequence of SEQ ID NO.: 27, the sequence of SEQ ID NO.: 28 or a sequence which is at least 75% identical to the sequence of SEQ ID NO.: 28, the sequence of SEQ ID NO.: 29 or a sequence which is at least 70% identical to the sequence of SEQ ID NO.: 29, the sequence of SEQ ID NO.: 30 or a sequence which is at least 60% identical to the sequence of SEQ ID NO.: 30, the sequence of SEQ ID NO.: 31 or a sequence which is at least 55% identical to the sequence of SEQ ID NO.: 31, the sequence of SEQ ID NO.: 32 or a sequence which is at least 55%

identical to the sequence of SEQ ID NO.: 32, the sequence of SEQ ID NO.: 33 or the sequence of SEQ ID NO.: 34.

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